

MER Shift Reports

STS-107

Day 9 Shift 1

**MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT**

TO: MER MANAGER

SUBJECT: FD09; 2nd SHIFT REPORT

GMT: 024:17:00

EVENTS:

Coordinated with IFM regarding usage on DC vacuum cleaner to clean BIOPACK filter. Gave a "go" for this usage of the vacuum cleaner.

Monitored "Second 70mm Hasselblad Motor Jam" anomaly. Batteries were replaced, twice, and the problem cleared. This occurred on S/N 1012 camera. This information was submitted to MER manager to support MER anomaly report. P.O.C. for this hardware are Dena Haynes (45112) and Barbara Whitted (31271).

FORWARD ACTIONS:

Monitor the water issue with the HUMSEP, which includes procedures for vacuum cleaner use. FCE is anticipating a CHIT to review on procedures.

Monitor Hasselblad anomalies and on-orbit performance, report to Dena Haynes/Barb Whitted as required.

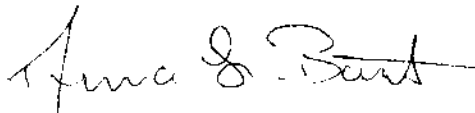
Monitor BIOPACK filter cleaning operations.

CHITS (Monitoring / Working / Waiting for Closure):

No new shuttle CHITs to report that affects FCE hardware. Still waiting on CHIT for review of HUMSEP clean-up procedure.

HARDWARE STATUS:

Aside from Hasselblad issue, there have been no FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.



Anna L. Burt
Flight Crew Equipment- GFE/CFE

STS-107 (OV-102 FLT 28)

1/24/03

8:00 AM

On-Orbit Shift Report

The HYD/WSB Systems are operating nominally and all parameters are within their expected ranges. There have been no additional circulation pump runs for thermal conditioning or bootstrap re-pressurization. The HYD/WSB group is not working any issues at this time.

Total Circ Pump Runs

Thermal	Accumulator Recharges
Sys 1: 1 for elevon Park	0
Sys 2: 0 runs	0
Sys 3: 0 runs	0

Jeffery S. Goza

HYD/WSB SSE

STS-107
MER Comm and Track Shift Report
GMT 24:13:00
Shift 1

All comm and track systems are operating nominally.

Ken McCrary

MER Comm & Track

STS-107 ESD SYSTEMS SHIFT REPORT

DAY 9 SHIFT 1

GMT 024/17:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics) continue to function satisfactorily with the following notes or exceptions:

FC/PRSD – The fifth on-orbit fuel cell purge was performed at 024:10:02 GMT (07/18:23 MET). During the 34-hour interval the approximate performance decay was 0.10 vdc in fuel cell 1, 0.15 vdc in fuel cell 2, and 0.14 vdc in fuel cell 3.

The fuel cells 1 & 3 alternate water line temperatures continue to be erratic, indicating slight leakage of warm fuel cell water through the check valves.

MOD-EGIL continues to work on the cryo management plan. Due to the lower than predicted power levels and less cryo being consumed, the overall Orbiter landing weight may be exceeded at nominal EOM and the CG may be outside the allowable envelope. The plan being worked now is to keep more cryo in the EDO pallet tanks than originally planned to help with CG concerns. A waiver may be processed to allow the landing weight over limit.

OMS/RCS – Still in ROMS interconnect, A regs; reconfigured system to B heaters at 024/13:26:52 GMT. This was performed one shift early as the pods were at the Flight Rule limit of 70 deg F. Interconnect usage is currently at 3.889 %.

APU – The APU heaters were reconfigured to the B string one shift early. NOTE: Vehicle reconfig to B heaters was performed one shift early

Walter Scott
ESD Team Lead

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 10

SHIFT 1

All ECLSS systems performing nominally.

Events:

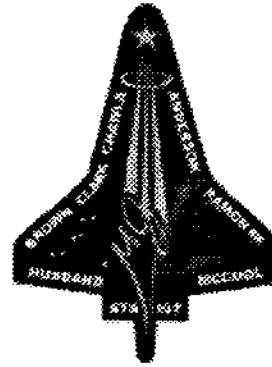
None

Issues:

MER is investigating impact that Spacehab IFM to increase air flow to Spacehab will have on Orbiter cooling systems.

Consumables:	Supply water	527.3 lb.
	Waste water	125.5 lb.
	Orbiter Nitrogen	195.5 lb.

Shift Leader
GMT 024/17:00



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/23/2003

GMT: 024/17:00:00

Shift: 1st

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Alan Ogletree

Signature: _____

A handwritten signature in black ink, appearing to be "A. Ogletree", written over a horizontal line.

MER Shuttle Safety Console
STS-107 FD 9 Shift 1
GMT 024:17:00

The MER Safety Console is not working any safety of flight issues.

Jim Pendergast



STS-107 MER TCS Thermal 1st Shift Report

January 24, 2003 11:30AM, 024/17:30 GMT

All thermal systems are performing nominally and all subsystem temperatures are within acceptable limits. Heater reconfig occurred at MET 7/21:48. ATL scenarios for end of mission attitudes are being assessed.

Dave Russell/Andy Hong

MER Shift Reports

STS-107

Day 9 Shift 2

STS-107 ESD SYSTEMS SHIFT REPORT
DAY 9 SHIFT 2
GMT 025/00:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics) continue to function satisfactorily with the following notes or exceptions:

ECLSS – Signed Chit STS 0010, SPACEHAB IFM 8.2 Contingency Air Duct Configuration.

Tom Davies
ESD Team Lead

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 10

SHIFT 2

All ECLSS systems performing nominally.

Events:

MET 08/04:31 Simo Dump initiated.
MET 08/06:06 Simo Dump terminated.

Consumables: Supply water 376.0 lb.
 Waste water 22.2 lb.
 Orbiter Nitrogen 190.1 lb.

Shift Leader
GMT 025/01:00



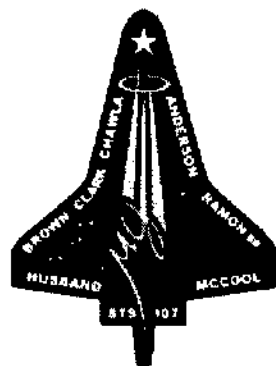
STS-107 MER Thermal 2nd Shift Report

025/01:00 GMT, 19:00 CST 01/24/2003

All thermal systems are performing nominally and all temperatures are within acceptable limits.

We are currently working on finalizing the EOM thermal conditioning plan. We have already made our recommendations to EECOM and PTG. EECOM has also alerted the Flight Director of our recommendations. The remaining issue is the final conditioning period prior to DeOrbit Prep. EECOM cannot fly the -ZLV +YVV attitude that we had suggested. They have made some suggestions that we are currently evaluating.

Lupe Gonzales/John Tran



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/24/2003


GMT: 025/01:00:00

Shift: 2nd

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Chris Thames

Signature: 

MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT

TO: MER MANAGER

SUBJECT: FD09; 3rd SHIFT REPORT

GMT: 025:01:00

EVENTS:

- 1) Worked with Dave Stephenson on write-up of Temporary CHIT for PGSC Power Supply Temperature Check.
- 2) Submitted Temporary CHIT (TS0016) PGSC Power Supply Temperature Check.
- 3) Contacted IFM, EGIL, and FAO for review/concurrence of Temp CHIT TS0016.

FORWARD ACTIONS:

- 1) Monitor the water issue with the HUMSEP, which includes procedures for vacuum cleaner use. FCE is anticipating a CHIT to review on procedures.
- 2) Monitor Hasselblad anomalies and on-orbit performance, report to Dena Haynes/Barb Whitted as required.
- 3) Monitor BIOPACK filter cleaning operations.
- 4) Monitor Temporary CHIT (TS0016) for PGSC Power Supply Temperature Check. Once in concurrence, ask to open temp CHIT.

CHITS (Monitoring / Working / Waiting for Closure):

No new shuttle CHITs to report that affects FCE hardware. Still waiting on CHIT for review of HUMSEP clean-up procedure.

HARDWARE STATUS:

Aside from Hasselblad issue, there have been no FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.



Falco A. Campana
Flight Crew Equipment- GFE/CFE

MER Shuttle Safety Console
STS-107 FD 9 Shift 2
GMT 025:02:00

The MER Safety Console is not working any safety of flight issues.

Brandon Dick

STS-107

OMS/RCS Day 9 Shift 2 Report

INITIATOR: Arrieta
DATE: January 24, 2003

MET: 08/10:45
GMT: 025/02:24
CENTRAL TIME: 8:24 PM CST

	Left		Right		Forward	
	Oxidizer	Fuel	Oxidizer	Fuel	Oxidizer	Fuel
PFS %	69.4	70.4	68.2	68.0	56.0	52.6
Interconnect Usage	0.325		3.991			

ORBIT

1. The mid-flight OMS/RCS Heater Reconfiguration was performed at 024/13:27 GMT. The forward RCS and left and right OMS pods and Crossfeed line heaters are now in the A-OFF, B-AUTO configuration.
2. Left OMS GN2 Accumulator pressure is holding.
3. Right OMS interconnect was broken and Left OMS interconnect established at 024/17:04 GMT.
4. Right OMS propellant tanks were manually repressurized at 024/17:06:09 GMT using the A regulators.
5. The mid-flight RCS Helium Regulator Reconfiguration was performed at 025/01:37GMT. The current RCS helium regulator configuration is A – CL (tb – CL), B – GPC (tb – OP).

Data Review

1. OMS and RCS system data has been reviewed up through 025/01:00 GMT. System performance continues as expected with no anomalies noted.
2. All vernier jet firing through 024/19:39:00.000 GMT have been reviewed. There have been no anomalous pulses.

RCS PRESSURIZATION LEG FRCS: B LRCS: B RRCS: B

AFT RCS INTERCONNECT CONFIGURATION: Left OMS Interconnect

23 of 38 primary thrusters have been fired. No new primary thrusters have been fired since the previous report:

F1F		L1A	X	R1A	X
F2F		L3A	X	R3A	X
F3F		L1L		R1R	
F1L		L2L		R2R	
F3L	X	L3L	X	R3R	X
F2R		L4L		R4R	
F4R	X	L1U	X	R1U	X
F1D	X	L2U		R2U	
F2D	X	L4U		R4U	
F3D	X	L2D	X	R2D	X
F4D	X	L3D	X	R3D	X
F1U	X	L4D	X	R4D	X
F2U	X				
F3U	X				

MER Shift Reports

STS-107

Day 9 Shift 3

STS-107 ESD SYSTEMS SHIFT REPORT

DAY 9 SHIFT 3

GMT 025/09:00

Energy Division Subsystems (MPS, RCS, OMS, FC/PRSD, APU, and Hydraulics) continue to function satisfactorily with the following notes or exceptions:

RCS/OMS:

	Left Oxidizer	Fuel	Right Oxidizer	Fuel	Forward Oxidizer	Fuel
PFS %	69.4	70.4	68.2	68.0	56.0	52.6
Interconnect Usage	0.325		3.991			

ORBIT

The mid-flight OMS/RCS Heater Reconfiguration was performed at 024/13:27 GMT. The forward RCS and left and right OMS pods and Crossfeed line heaters are now in the A-OFF, B-AUTO configuration.

Left OMS GN2 Accumulator pressure is holding.

Right OMS interconnect was broken and Left OMS interconnect established at 024/17:04 GMT.

Right OMS propellant tanks were manually re-pressurized at 024/17:06:09 GMT using the "A" regulators.

The mid-flight RCS Helium Regulator Reconfiguration was performed at 025/01:37GMT. The current RCS helium regulator configuration is A – CL (tb – CL), B – GPC (tb – OP).

Data Review

OMS and RCS system data has been reviewed up through 025/01:00 GMT. System performance continues as expected with no anomalies noted.

All vernier jet firing through 024/19:39:00.000 GMT have been reviewed. There have been no anomalous pulses.

RCS PRESSURIZATION LEG FRCS: B LRCS: B RRCS: B

AFT RCS INTERCONNECT CONFIGURATION: Left OMS Interconnect

23 of 38 primary thrusters have been fired. No new primary thrusters have been fired since the previous report:

F1F	L1A X	R1A X
F2F	L3A X	R3A X

F3F		L1L		R1R	
F1L		L2L		R2R	
F3L	X	L3L	X	R3R	X
F2R		L4L		R4R	
F4R	X	L1U	X	R1U	X
F1D	X	L2U		R2U	
F2D	X	L4U		R4U	
F3D	X	L2D	X	R2D	X
F4D	X	L3D	X	R3D	X
F1U	X	L4D	X	R4D	X
F2U	X				
F3U	X				

Richard Phillips
ESD Team Lead

STS-107

OMS/RCS Day 9 Shift 2 Report

INITIATOR: Arrieta
DATE: January 24, 2003

MET: 08/10:45
GMT: 025/02:24
CENTRAL TIME: 8:24 PM CST

	Left		Right		Forward	
	Oxidizer	Fuel	Oxidizer	Fuel	Oxidizer	Fuel
PFS %	69.4	70.4	68.2	68.0	56.0	52.6
Interconnect Usage	0.325		3.991			

ORBIT

1. **The mid-flight OMS/RCS Heater Reconfiguration** was performed at 024/13:27 GMT. The forward RCS and left and right OMS pods and Crossfeed line heaters are now in the A-OFF, B-AUTO configuration.
2. **Left OMS GN2 Accumulator pressure is holding.**
3. **Right OMS interconnect was broken and Left OMS interconnect established** at 024/17:04 GMT.
4. **Right OMS propellant tanks were manually repressurized** at 024/17:06:09 GMT using the A regulators.
5. **The mid-flight RCS Helium Regulator Reconfiguration** was performed at 025/01:37GMT. The current RCS helium regulator configuration is A – CL (tb – CL), B – GPC (tb – OP).

Data Review

1. OMS and RCS system data has been reviewed up through 025/01:00 GMT. System performance continues as expected with no anomalies noted.
2. All vernier jet firing through 024/19:39:00.000 GMT have been reviewed. There have been no anomalous pulses.

RCS PRESSURIZATION LEG FRCS: B LRCS: B RRCS: B

AFT RCS INTERCONNECT CONFIGURATION: Left OMS Interconnect

23 of 38 primary thrusters have been fired. No new primary thrusters have been fired since the previous report:

F1F		L1A	X	R1A	X
F2F		L3A	X	R3A	X
F3F		L1L		R1R	
F1L		L2L		R2R	
F3L	X	L3L	X	R3R	X
F2R		L4L		R4R	
F4R	X	L1U	X	R1U	X
F1D	X	L2U		R2U	
F2D	X	L4U		R4U	
F3D	X	L2D	X	R2D	X
F4D	X	L3D	X	R3D	X
F1U	X	L4D	X	R4D	X
F2U	X				
F3U	X				

ORBITER ECLSS

STS-107 ECLSS SHIFT REPORT

FLIGHT DAY 10

SHIFT 3

All ECLSS systems performing nominally.

Consumables:	Supply water	435.4 lb.
	Waste water	35.9 lb.
	Orbiter Nitrogen	189.2 lb.

Shift Leader
GMT 025/08:47

MER Shuttle Safety Console
STS-107 FD 9 Shift 3
GMT 025:08:35

The MER Safety Console is not working any safety of flight issues.

Michael Etchells



Thermal 3rd Shift Report

STS-107, January 25, 2003
3 AM, MET 08/17:21 (25/09:00 GMT)

All temperatures are within acceptable limits and all thermal systems are operating nominally.

TCS expects that attitudes for main landing gear tire thermal conditioning will be incorporated into the timeline in the next day. The TCS recommendation included changes to the timeline from -ZLV -XVV to -ZLV+YVV for four periods: 11/02:30 MET for ~13 hrs, 12/00:15 for ~16 hrs, 12/22:40 for ~19 hrs and 13/23:15 for ~16 hrs. Also, the last 16 hrs prior to deorbit prep should include eight hours of bottom sun followed by -ZLV+YVV.

Diana Coronado



DPS PASS FSW, MEDS & H/W MER Shift Report

STS-107

Date: 1/25/2003

GMT: 025/09:00:00

Shift: 3rd

SYSTEM STATUS / ISSUES BEING WORKED

- All DPS systems performing nominally.

DPS Team Lead: Jeremy Battan

Signature: Jeremy C Battan

**MER FLIGHT CREW EQUIPMENT- GFE/CFE
STS-107 SHIFT REPORT**

TO: MER MANAGER

SUBJECT: FD10; 1st SHIFT REPORT

GMT: 025:09:00

EVENTS:

- 1) Coordinated with MER, SPAN, MMACS, and IFM on CHIT TS0016 for PGSC Power Supply Temperature Check.
- 2) MEIDEX Science

FORWARD ACTIONS:

- 1) Need to contact Dave Stephenson Saturday morning (1/25/03) for additional information regarding Preliminary CHIT TS0016. Specifically who will write the Flight Note for the procedure and when this data is needed (SPAN indicated the weekend is already busy).
- 2) Monitor the water issue with the HUMSEP, which includes procedures for vacuum cleaner use. FCE is anticipating a CHIT to review on procedures.
- 3) Monitor Hasselblad anomalies and on-orbit performance, report to Dena Haynes/Barb Whitted as required.
- 4) Monitor BIOPACK filter cleaning operations.
- 5) Monitor Temporary CHIT (TS0016) for PGSC Power Supply Temperature Check. Once in concurrence, ask to open temp CHIT.

CHITS (Monitoring / Working / Waiting for Closure):

No new shuttle CHITs to report that affects FCE hardware. Still waiting on CHIT for review of HUMSEP clean-up procedure.

HARDWARE STATUS:

There have been no FCE anomalies recorded this reporting period. It is assumed all FCE is performing nominally.

Flight Crew Equipment- GFE/CFE
Maurice J. Lehmann

